

Amendments to the Claims

This listing of claims shall replace all prior versions, and listings, of claims in the instant Application.

1. (Previously Presented) An interpositional arthroplasty implant for use in repairing ginglymus joints such as the joints of the ankle, consisting essentially of a monolithic tibiotalar implant having a first major surface adapted to be positioned against a tibia and shaped to allow the tibia to articulate across the first major surface; and a second major surface adapted to be positioned against a talus, and a bead shaped structure proximate to the implant's anterior side sized to engage the neck of the talus.
2. (Previously Presented) An implant according to claim 1 wherein the tibiotalar implant further comprises one or more additional external structures adapted to improve retention of the implant within the joint site.
3. (Previously Presented) An implant according to claim 2 wherein the bead shaped structure is integral with the implant's anterior side.
4. (Original) An implant according to claim 1 wherein the implant comprises a biomaterial.

5. (Original) An implant according to claim 4 wherein the biomaterial is a polyurethane.

6. (Original) An implant according to claim 5 wherein the polyurethane is biocompatible with respect to cytotoxicity, sensitization, genotoxicity, chronic toxicity, and carcinogenicity.

7. (Original) An implant according to claim 5 wherein polyurethane has a Shore hardness of at least about 60 D or less.

8. – 18. Cancelled.

19. (Previously Presented) A method of repairing a tibiotalar joint, comprising the steps of providing and implanting an implant according to claim 1, the implant being inserted through an incision anterior to the tibiotalar joint.

20. (Previously Presented) An implant according to claim 1 inserted into a ginglymus joint, the ginglymus joint being a tibiotalar joint, the single piece implant's first major surface positioned against the tibia, its second major surface positioned against the talus, and an integral bead shaped structure proximate the implant's anterior side engaging a neck of the talus.

21. Cancelled.

22. (Previously Presented) A device for implantation into an ankle joint space within the body of a mammal, the device consisting essentially of a monolithic structure fabricated from a biocompatible, biodurable material that is adapted to be inserted into the joint compartment, the monolithic structure including a first major surface adapted to be positioned against a tibia, such that the tibia can articulate across the first major surface, and a second major surface adapted to be positioned against a talus, wherein the implanted device is substantially free of anchoring portions that need to be attached to the bone, cartilage, ligaments or other tissue, wherein the implanted device is shaped so that it has minimal translation, rotation, or other undesired movement or dislocation within or from the joint space.

23. Cancelled.

24. (Previously Presented) A device according to claim 22 wherein stability of the device within the joint space is provided by the congruency of the device to the talus.

25. (Previously Presented) An interpositional arthroplasty device for use in repairing joints of the ankle, consisting essentially of a monolithic interpositional tibiotalar implant that provides a first major surface adapted to be positioned against a tibia shaped to allow the tibia to articulate across the first major surface, and a second major surface adapted to be positioned against a talus, wherein the implant comprises

an integral bead shaped structure proximate its anterior side adapted to engage the neck of a talus to improve fixation to the talus, wherein the monolithic implant comprises a polyurethane that includes both hard and soft segments.